

SIMANF{R}

Model for *Pinus pinaster mesogeensis* Sistema Ibérico Meridional (Spain)

Model

Ppinaster_me_sim_v01

Model description

- Specie: *Pinus pinaster* Ait. subsp. *mesogeensis*
- Spanish Forest Inventory (SFI) code: 26
- Geographical area: Sistema Ibérico Meridional
- Geographical area (administrative): Soria, Guadalajara, Cuenca y Teruel

Model type

- Category: growth
- Model level: distance independent individual tree model
- Reproduction methods: seedling forest
- Stand structure: even-aged stands
- Species composition: monospecific stands
- Forest origin: natural

Model requirements and recommended use

- Initial inventory requirements: age, dominant height and basal area of the plot; expan and dbh of the trees
- Geographical area: Sistema Ibérico Meridional, closer places and another places with similar characteristics (assuming differences)
- Stand type: monospecific stands, resinated or not
- Execution recommended time: 5 years executions (survival, growth and ingrowth equations developed by using that criteria)
- Site Index is defined as top height at a base age of 80 years



Figure 1: *Pinus pinaster*, by MAMM Miguel Angel is licensed under CC BY 2.0



Figure 2: Details of *Pinus pinaster*, by 'A description of the genus *Pinus*', Aylmer Bourke Lambert

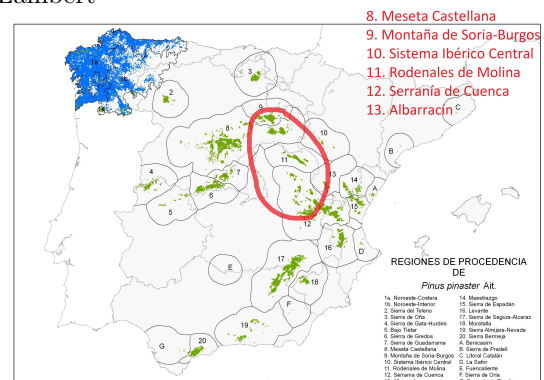


Figure 3: Provenance regions of *Pinus pinaster* in Spain, by MAPA

Bibliography

Complete SiManFor model (recommended citation):

Lizarralde I, Ordóñez C, Bravo-Oviedo A, Bravo F 2010. IBEROPT: Modelo de dinámica de rodales de Pinus pinaster Ait. en el sistema ibérico meridional

Model components:

- **Site Index equations:**

Bravo-Oviedo A, del Río M, Montero G (2004). Site index curves and growth model for Mediterranean maritime pine (Pinus pinaster Ait.) in Spain. Forest Ecology and Management, 201(2-3), 187-197

- **Survival equation:**

Bravo-Oviedo A, Sterba H, del Río M, Bravo F (2006). Competition-induced mortality for Mediterranean Pinus pinaster Ait. and P. sylvestris L. Forest Ecology and Management, 222(1-3), 88-98

- **Diameter growth equation:**

Lizarralde I (2008). Dinámica de rodales y competencia en las masas de pino silvestre (Pinus sylvestris L.) y pino negral (Pinus pinaster Ait.) de los Sistemas Central e Ibérico Meridional. Tesis Doctoral. 230 pp

- **Height growth equation:**

Lizarralde I (2008). Dinámica de rodales y competencia en las masas de pino silvestre (Pinus sylvestris L.) y pino negral (Pinus pinaster Ait.) de los Sistemas Central e Ibérico Meridional. Tesis Doctoral. 230 pp

- **Ingrowth and distribution equation:**

Bravo F, Pando V, Ordóñez C, Lizarralde I (2008). Modelling ingrowth in mediterranean pine forests: a case study from scots pine (Pinus sylvestris L.) and mediterranean maritime pine (Pinus pinaster Ait.) stands in Spain. Forest Systems, 17(3), 250-260

- **General calculations: bal, g, slenderness, normal circumference:**

Standard equations

- **Generalized height-diameter equation:**

Lizarralde I (2008). Dinámica de rodales y competencia en las masas de pino silvestre (Pinus sylvestris L.) y pino negral (Pinus pinaster Ait.) de los Sistemas Central e Ibérico Meridional. Tesis Doctoral. 230 pp

- **Crown equations:**

Lizarralde I (2008). Dinámica de rodales y competencia en las masas de pino silvestre (Pinus sylvestris L.) y pino negral (Pinus pinaster Ait.) de los Sistemas Central e Ibérico Meridional. Tesis Doctoral. 230 pp

- **Taper equations over and under bark (volume):**

Lizarralde I (2008). Dinámica de rodales y competencia en las masas de pino silvestre (Pinus sylvestris L.) y pino negral (Pinus pinaster Ait.) de los Sistemas Central e Ibérico Meridional. Tesis Doctoral. 230 pp

- **Biomass equations:**

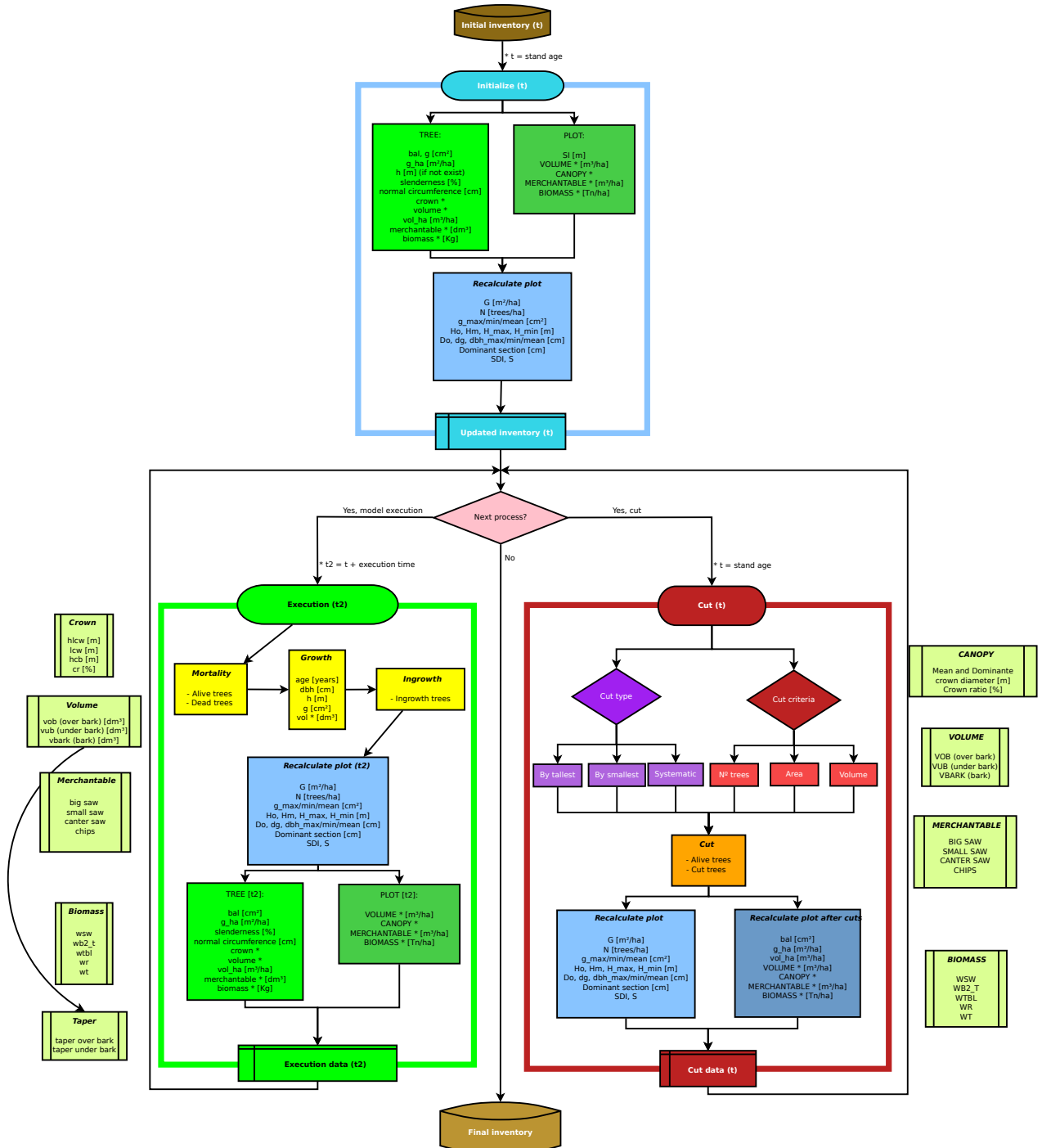
Ruiz-Peinado R, del Río M, Montero G (2011). New models for estimating the carbon sink capacity of Spanish softwood species. Forest Systems, 20(1), 176-188

- **Technological wood uses information:**

Rodríguez F (2009). Cuantificación de productos forestales en la planificación forestal: Análisis de casos con cubiFOR. In Congresos Forestales

- **Value for Reineke Index equation:**

del Río M, López E, Montero G (2006). Manual de gestión para masas procedentes de repoblación de Pinus pinaster Ait., Pinus sylvestris L. y Pinus nigra Arn. en Castilla y León (No. 634.9560946 R585). Junta de Castilla y León, Castilla y León (España). Consejería de Medio Ambiente Ministerio de Educación y Ciencia, Madrid (España) Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria, Madrid (España)



Contacts

Aitor Vázquez Veloso

Sustainable Forest Management Research Institute UVa-INIA, iuFOR (University of Valladolid-INIA)
Vegetal Production and Forest Resources Department
Higher Technical School of Agricultural Engineering - Avd. Madrid s/n, 34004 Palencia (Spain)
Tel.: +34 979 108 430
e-mail: aitor.vazquez.veloso@uva.es
more info.: <http://sostenible.palencia.uva.es/users/aitorvazquez>

Cristóbal Ordóñez

Sustainable Forest Management Research Institute UVa-INIA, iuFOR (University of Valladolid-INIA)
Vegetal Production and Forest Resources Department
Higher Technical School of Agricultural Engineering - Avd. Madrid s/n, 34004 Palencia (Spain)
Tel.: +34 979 108 417
e-mail: a.cristo@pvs.uva.es
more info.: <http://sostenible.palencia.uva.es/users/acristo>

Felipe Bravo Oviedo

Sustainable Forest Management Research Institute UVa-INIA, iuFOR (University of Valladolid-INIA)
Vegetal Production and Forest Resources Department
Higher Technical School of Agricultural Engineering - Avd. Madrid s/n, 34004 Palencia (Spain)
Tel.: +34 979 108 417
e-mail: fbravo@pvs.uva.es
more info.: <http://sostenible.palencia.uva.es/users/fbravo>

Interest Links

SiManFor: Support system for simulating Sustainable Forest Management Alternatives (2020)
In: SiManFor. <http://www.simanfor.es/>. Accessed 15 May 2020

Sustainable Forest Management Research Institute UVa-INIA (iuFOR) (2020) In iuFOR. <http://sostenible.palencia.uva.es/>. Accessed 15 May 2020

Higher Technical School of Agricultural Engineering of Palencia. (2020) In: ETSIIAA Palencia. <http://etsiiaa.uva.es/>. Accessed 15 May 2020

University of Valladolid (UVa). (2020) In: UVa. <http://www.uva.es/export/sites/uva/>. Accessed 15 May 2020

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